

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001833

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: A61M 16/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 DWPI:IPC A61M & keywords: (breath, CPAP, ventilator, respirator, sense, detect, control, regulate, pressure, time, flow, index, synchronise, phase, predetermine, nasal, nose, nare, leak, difference, drop, mouth, volume) and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | GB 2294400 A (INNOVATIVE MEDICAL SYSTEMS INC) 1 May 1996 Whole document | 1-17 |
| A | EP 0188071 B1 (TOTTORI UNIVERSITY) 3 August 1988 Whole document | 1-17 |
| A | DE 10164446 A1 (MAP MEDIZIN-TECHNOLOGIE GMBH) 10 July 2003 Whole document | 1-17 |

☒ Further documents are listed in the continuation of Box C
 ☒ See patent family annex

| | |
|---|--|
| * Special categories of cited documents: | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "E" earlier application or patent but published on or after the international filing date | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" document member of the same patent family |
| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | |

 Date of the actual completion of the international search
 17 February 2005

 Date of mailing of the international search report
 23 FEB 2005

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| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | EP 0956877 B1 (SIEMENS-ELEMA AB) 26 November 2003 Whole document | 1-17 |
| A | WO 2000/047260 A1 (MALLINCKRODT DEVELOPPEMENT FRANCE) 17 August 2000 Whole document | 1-17 |
| A | JP 2001259036 A (TEIJIN LTD) 25 September 2001 Whole document | 1-17 |
| A | AU 40463/95 (703829) B2 (SUNRISE MEDICAL HHG INC) 4 April 1999 Whole document | 1-18 |
| A | WO 2003/039637 A1 (FISHER & PAYKEL HEALTHCARE LIMITED) 15 May 2003 Whole document | 18 |
| P,A | WO 2004/078246 A1 (RESMED LIMITED) 16 September 2004 Whole document | 18 |
| P,A | JP 2004105230 A (TEIJIN LTD) 8 April 2004 Whole document | 18 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/001833**Box No. II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See attached sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No: III

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1-17 are directed to CPAP apparatus and a method of controlling the blower operation. It is considered that the step of 'controlling the pressure in synchrony with the patient's breathing cycles' comprises a first "special technical feature".
2. Claim 18 is directed to a method of detecting the presence of mouth leak. It is considered that the 'method steps' comprises a second "special technical feature".

Since the above mentioned groups of claims do not share any of the technical features identified, a "technical relationship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly the international application does not relate to one invention or to a single inventive concept, a priori.

It is considered that search and examination for the second invention will require more than a little additional search and examination effort over that for the first invention, and therefore an additional search fee is warranted.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/001833

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in Search Report | | | | Patent Family Member | | | |
|---|-------------|------|------------|----------------------|-------------|----|----------|
| GB | 2294400 | CA | 2161374 | DE | 19540344 | FR | 2726191 |
| | | US | 5645054 | WO | 1993/024169 | | |
| EP | 0188071 | CA | 1262223 | JP | 61131756 | US | 4681099 |
| DE | 10164446 | NONE | | | | | |
| EP | 0956877 | JP | 2000000307 | US | 6240920 | | |
| WO | 2000/047260 | CA | 2361629 | EP | 1150731 | FR | 2789592 |
| | | US | 6761167 | | | | |
| JP | 2001259036 | NONE | | | | | |
| AU | 4046395 | AU | 13181/99 | AU | 40463/95 | AU | 93238/98 |
| | | BR | 9505908 | CA | 2163855 | EP | 0722747 |
| | | US | 5551419 | | | | |
| WO | 2003/039637 | NONE | | | | | |
| WO | 2004/078246 | US | 2004231670 | | | | |
| JP | 2004105230 | NONE | | | | | |
| Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001. | | | | | | | |
| END OF ANNEX | | | | | | | |